Climate Change Mitigation after Paris- the challenge

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Paris Agreement, 2015

- New agreement for after 2020, under UNFCCC
- Stricter objective: keep temp increase “well below 2°C and pursue efforts to keep it below 1.5°C”
- Net zero GHG emissions in second half of century (net zero CO2 by 2060-2075 -2°C; around 2050 – 1.5°C)
- Low emissions development strategies from all countries requested
- Voluntary mitigation pledges for 188 countries (so called (I)NDCs)
- No agreed equity criteria >> self-differentiation
- 5 year stocktake and upgrading of NDCs, starting in 2018/2010
- No more Annex-I vs non-Annex-I, but some differentiation between developed and developing countries

The CO_2 emissions budget

IPCC: Increase in global temperature
is
proportional to cumulative emissions

The Emissions "Budget" for 2° C

Total budget	≈	2900 Gt CO_2
Used up to now	≈	1900 Gt CO_2
Remaining	≈	1000 Gt CO_2

IPCC scenarios

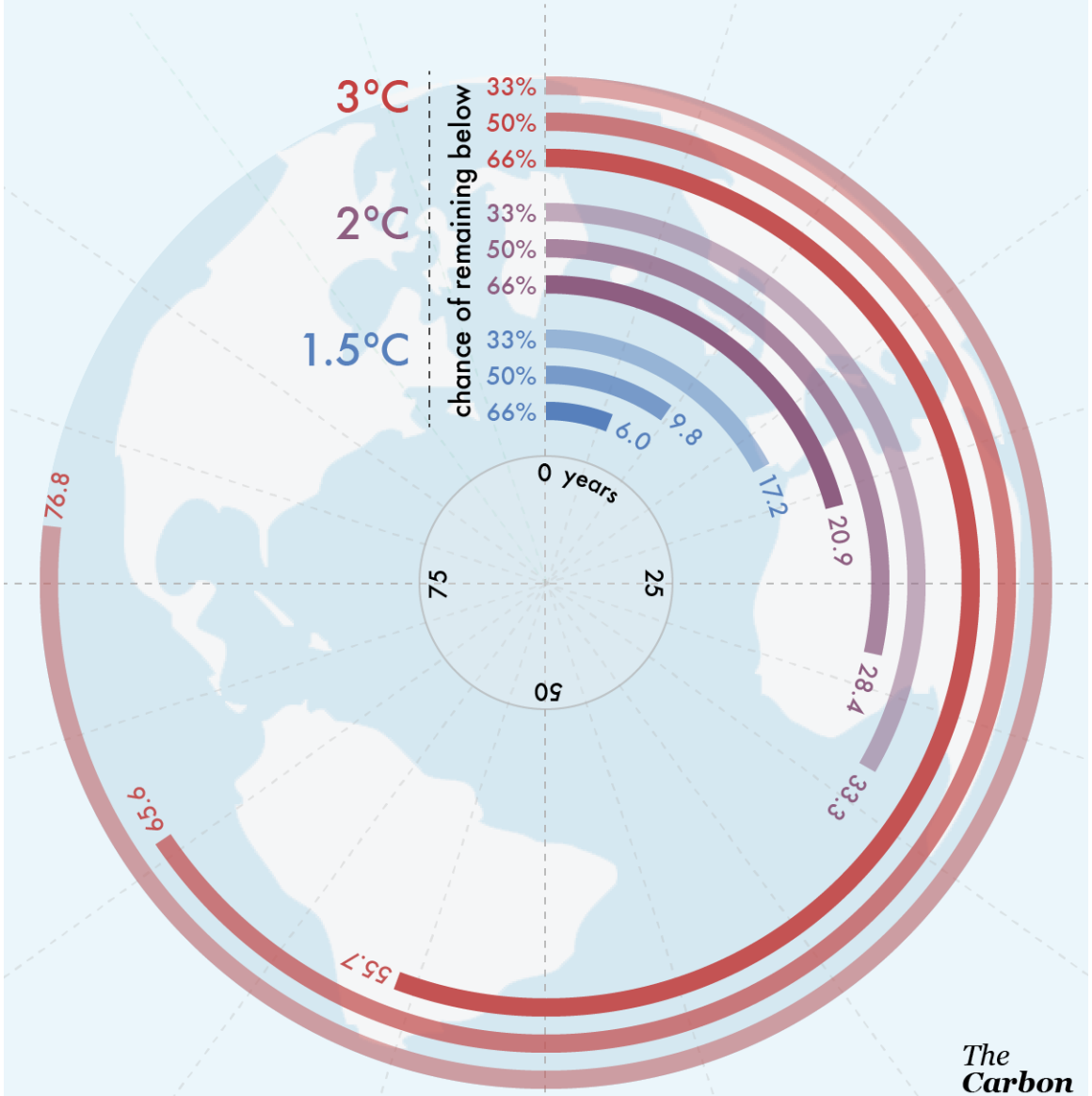
At current rate of emissions
(≈ 40 Gt CO_2 /yr) ± 25 years!

Net zero GHG emissions: end of century
Net zero CO2 2060-2075

Source: UNEP Emissions Gap Report 2015

Carbon Countdown

How many years of current emissions would use up the IPCC's carbon budgets for different levels of warming?



http://bit.ly/carboncountdown

The Carbon Brief

What will be the contribution of INDCs to the temperature target?

- Full implementation of unconditional INDCs results in emission level estimates in 2030 that are most consistent with scenarios that limit global average temperature increase to below 3.5 °C (range: 3 - 4 °C) by 2100 with a greater than 66 % chance

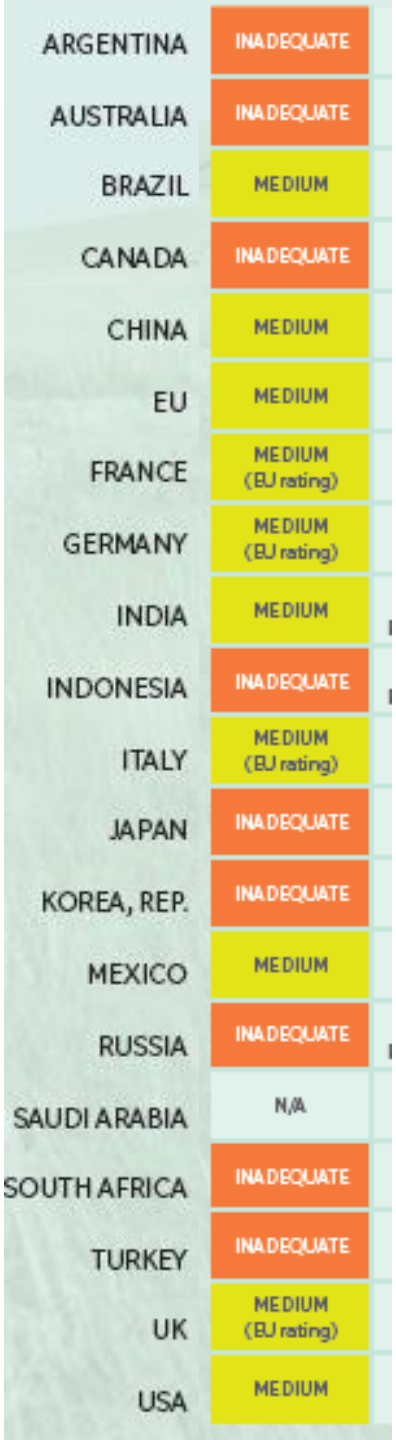
- Full implementation of conditional INDCs results in emission level estimates most consistent with scenarios that limit temperature increase to <3-3.5 °C by 2100

- INDC estimates have uncertainty ranges associated with them

Who should do what, by when?

- Many different equity criteria, very different outcomes, depending on (subjective) choice
  - Responsibility (historic cumulative emissions)
  - Capability (GDP/cap or HDI)
  - Equality (per capita emission convergence)
  - Equal cumulative emission per capita (over certain period)
  - Responsibility/ Capability/Need
  - Staged approach
  - Combined principles
- Can we allocate responsibility for climate impacts?
  - With historic cumulative emissions share of realised/ committed warming can be derived
  - Climate impacts much more complex

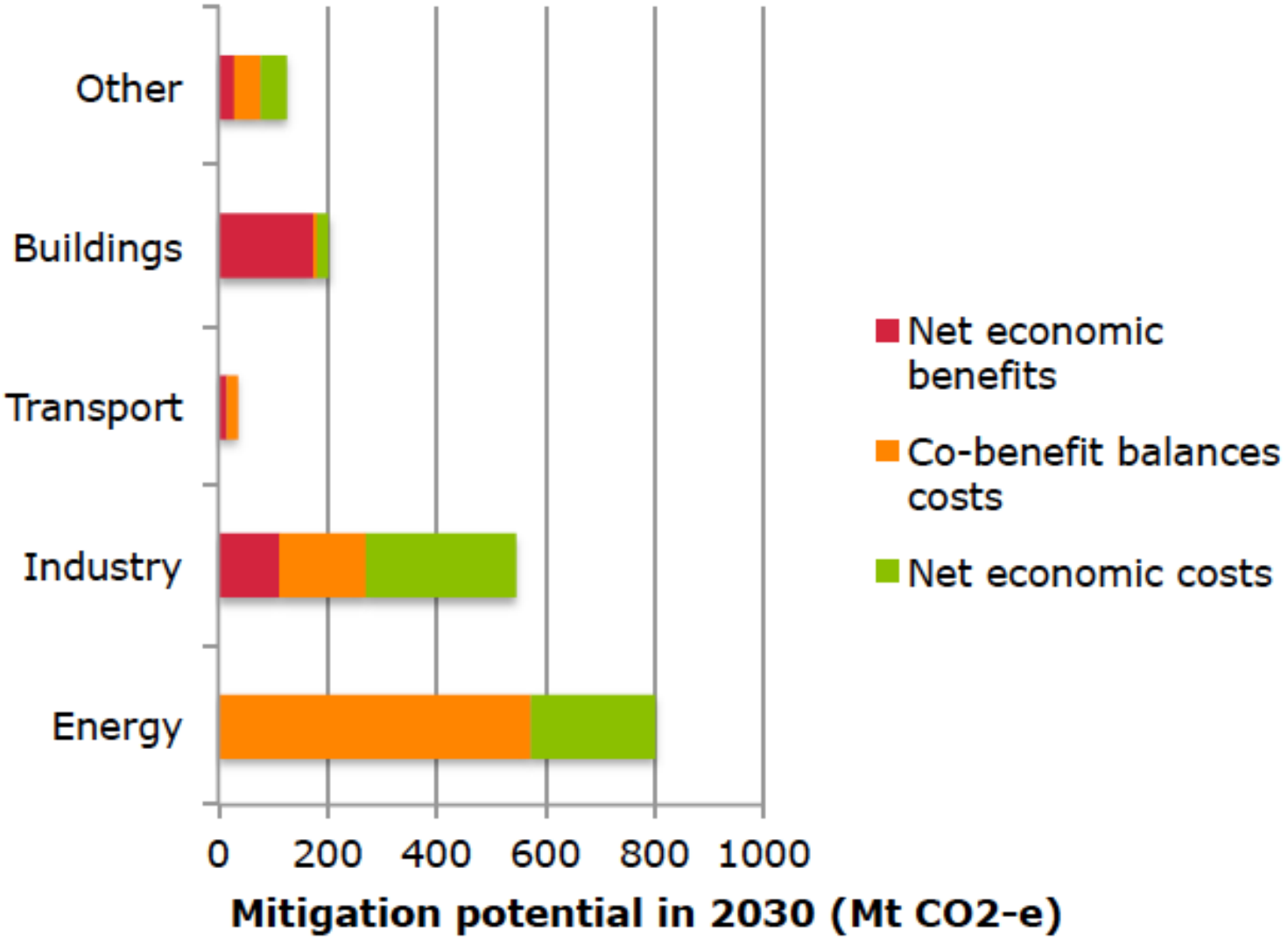
Climate Action Tracker equity rating of new pledges (INDCs)



How to proceed?

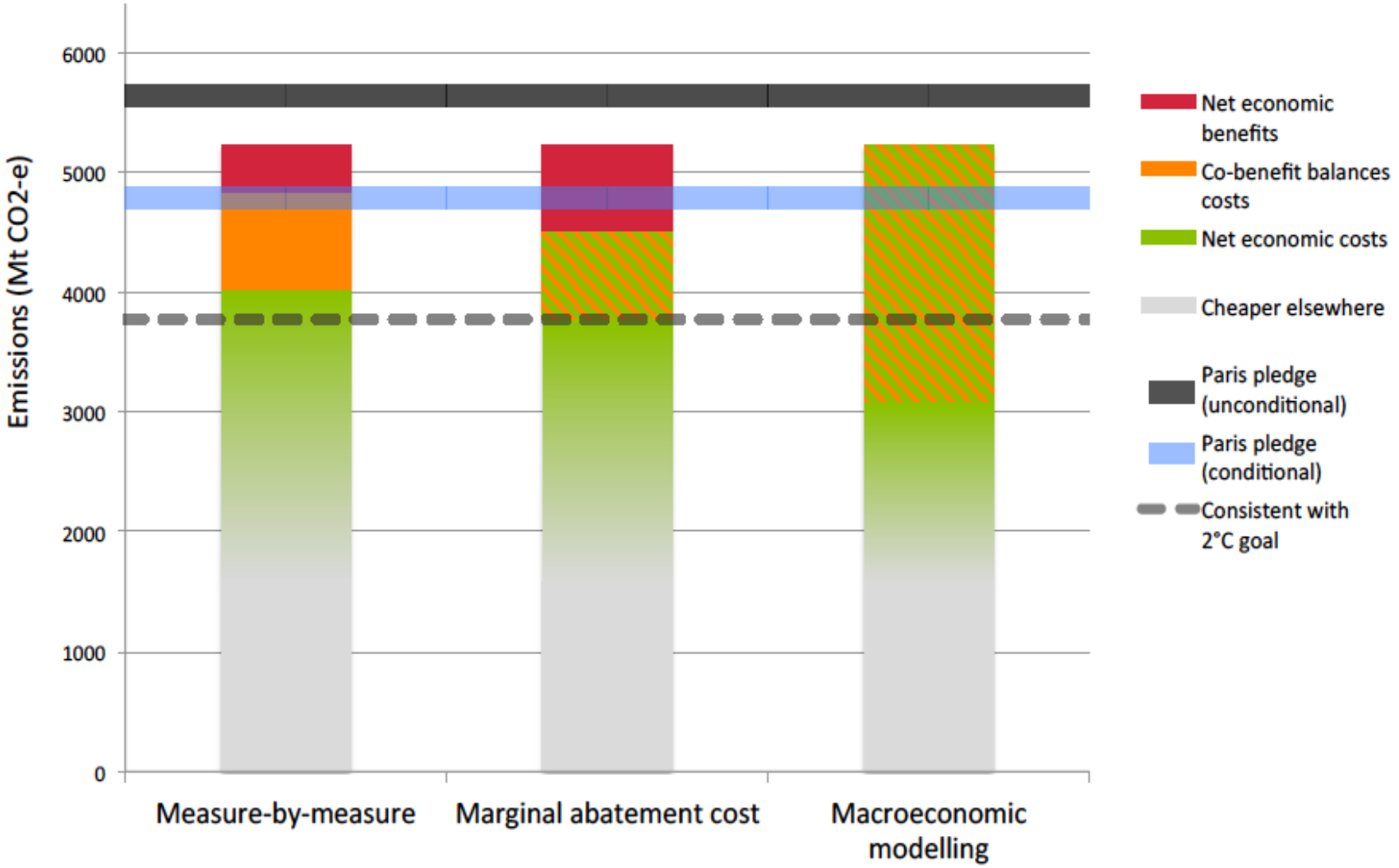
- No agreement on equity principles and criteria
- “Burden sharing” approach and “self differentiation” leads to insufficient action
- Different paradigm?
  - Transformation to sustainable, low carbon, climate resilient economy has many benefits
  - All countries to pursue this
  - Assistance to developing countries to realise those benefits (and the full mitigation potential)

India mitigation potential and costs



Source: Climate Action Tracker, 2015

Projected India mitigation potential and costs in 2030



Source: Climate Action Tracker, 2015

Thank you

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